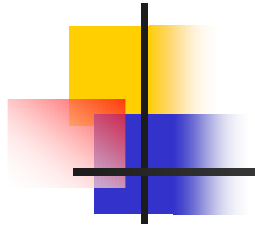




Kansas Ambient Air Quality Monitoring



Air Monitoring

- Why do we monitor ?
- Where do we monitor?
- Who monitors?
- How do we monitor?
- What do we monitor for?
- What do the results look like?
- What do we do with the results?
- Where are we headed?
- Why should you care?



Why do we monitor?

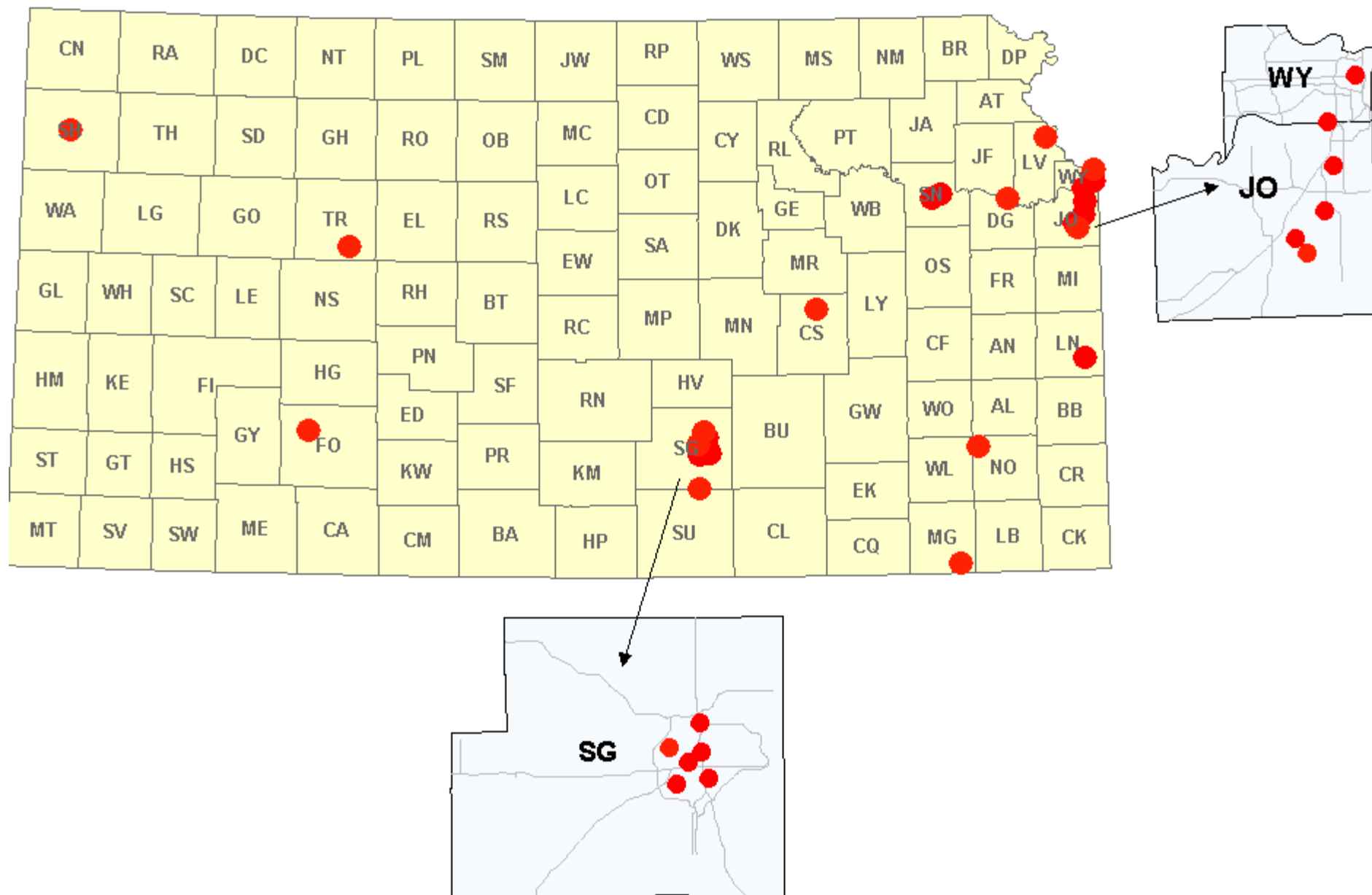
- Compliance with standards
- Evaluate trends
- Determine health risk
- Determine baseline concentrations
- PSD permit requirement
- Model validation



Where do we monitor (2004)?

- Generally population based
- 25 locations
- 62 monitors
- 7 locations with meteorological stations
- 2 transport sites; 1 background site

Air Quality Monitoring Sites in Kansas





Monitoring

- Who monitors
 - KDHE staff
 - Local agencies
 - Contracted individuals
 - Sac and Fox Tribe
 - Industry
- How do we monitor
 - Fixed sites
 - Continuous monitors in trailers
 - PM filter monitors on roofs or platforms

Mine Creek Monitoring Site – Linn Co.





Leavenworth, KS monitor



Monitor Racks and Equipment





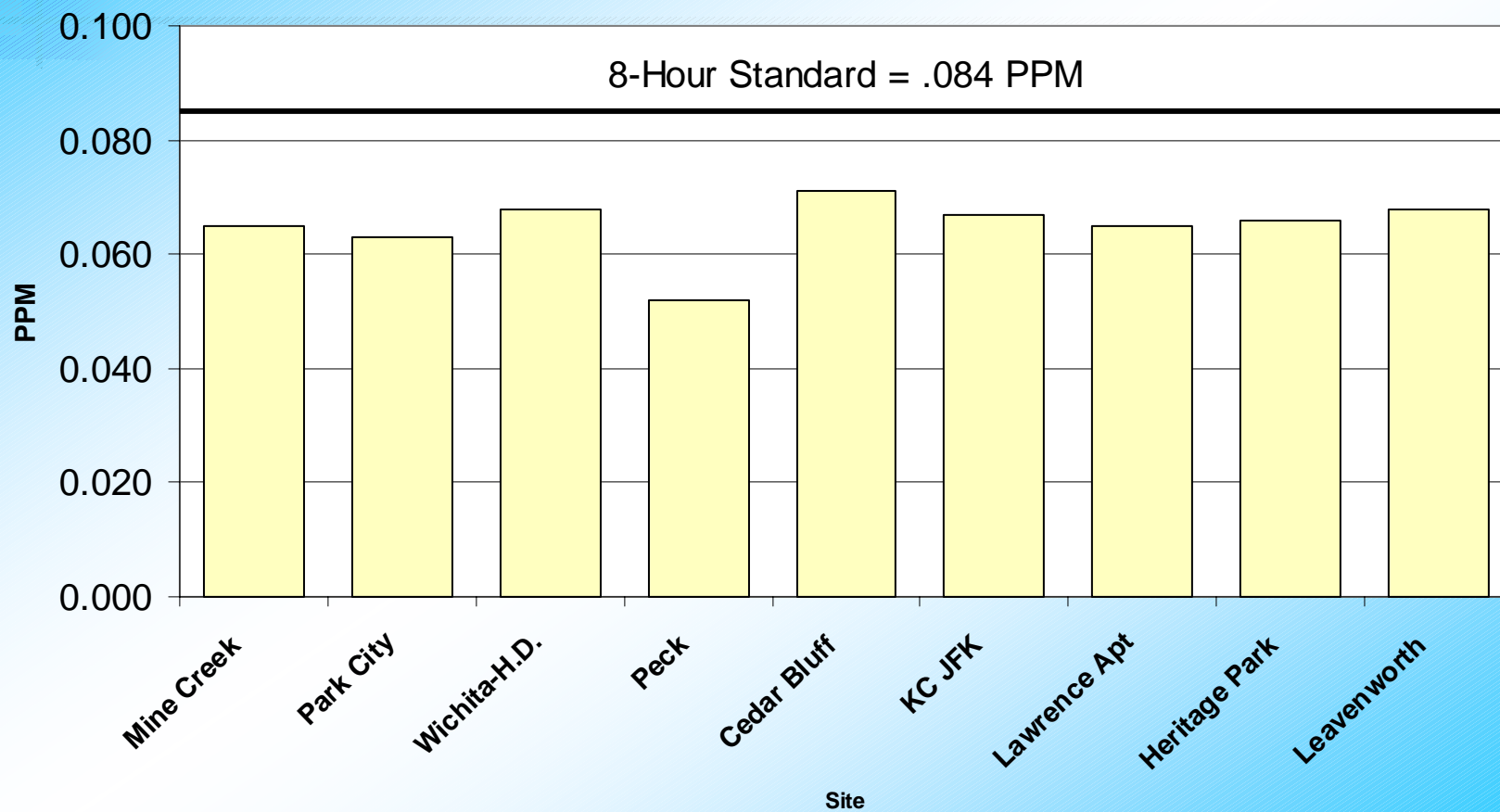
What do we monitor for?

- Ozone
- Nitrogen Oxides
- Sulfur Dioxide
- PM₁₀
- PM_{2.5} and speciation
- IMPROVE
- Carbon Monoxide
- Hydrogen Sulfide
- Ammonia
- Hazardous Air Pollutants (Wichita)
- Meteorological conditions

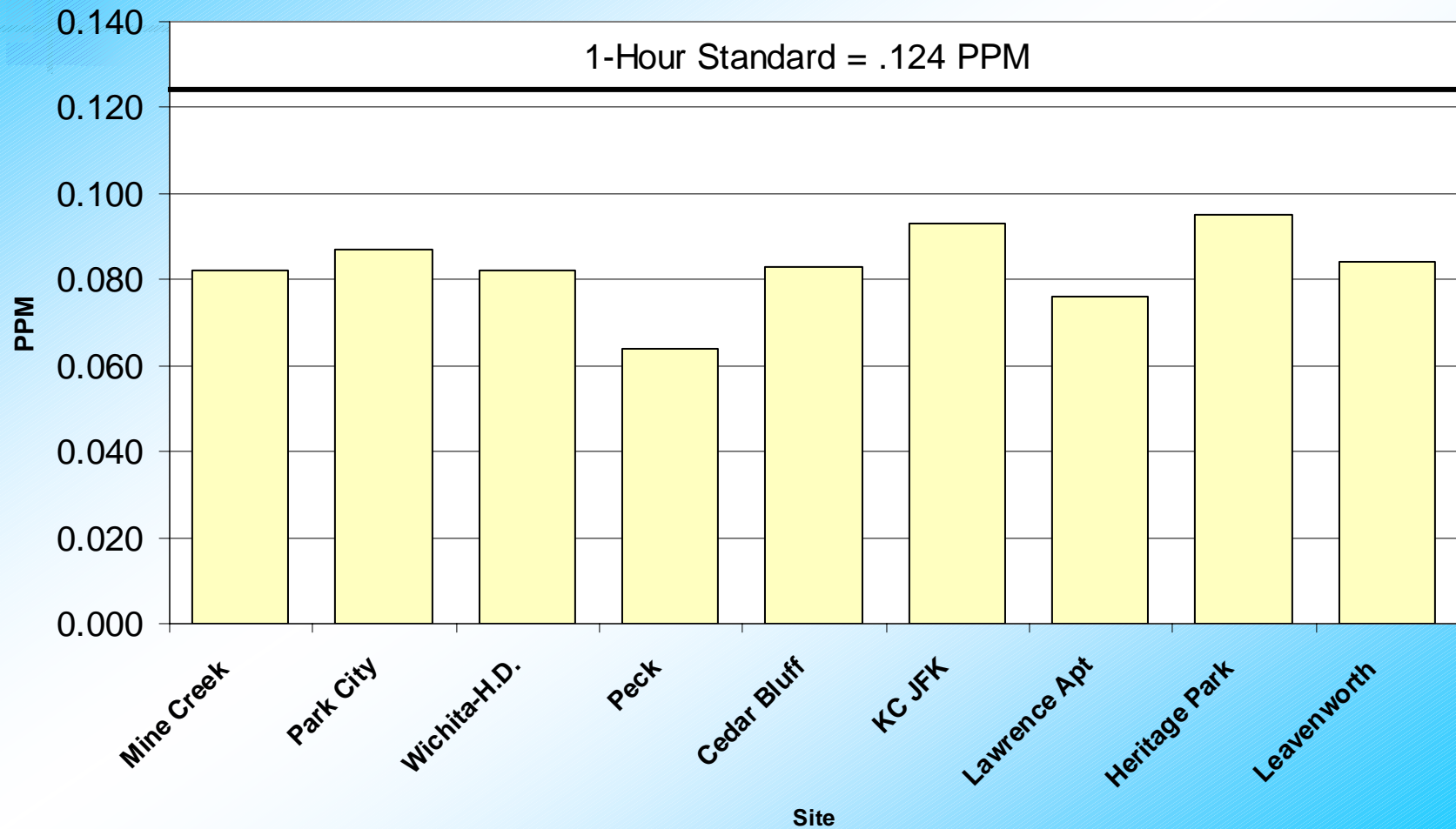


The Results

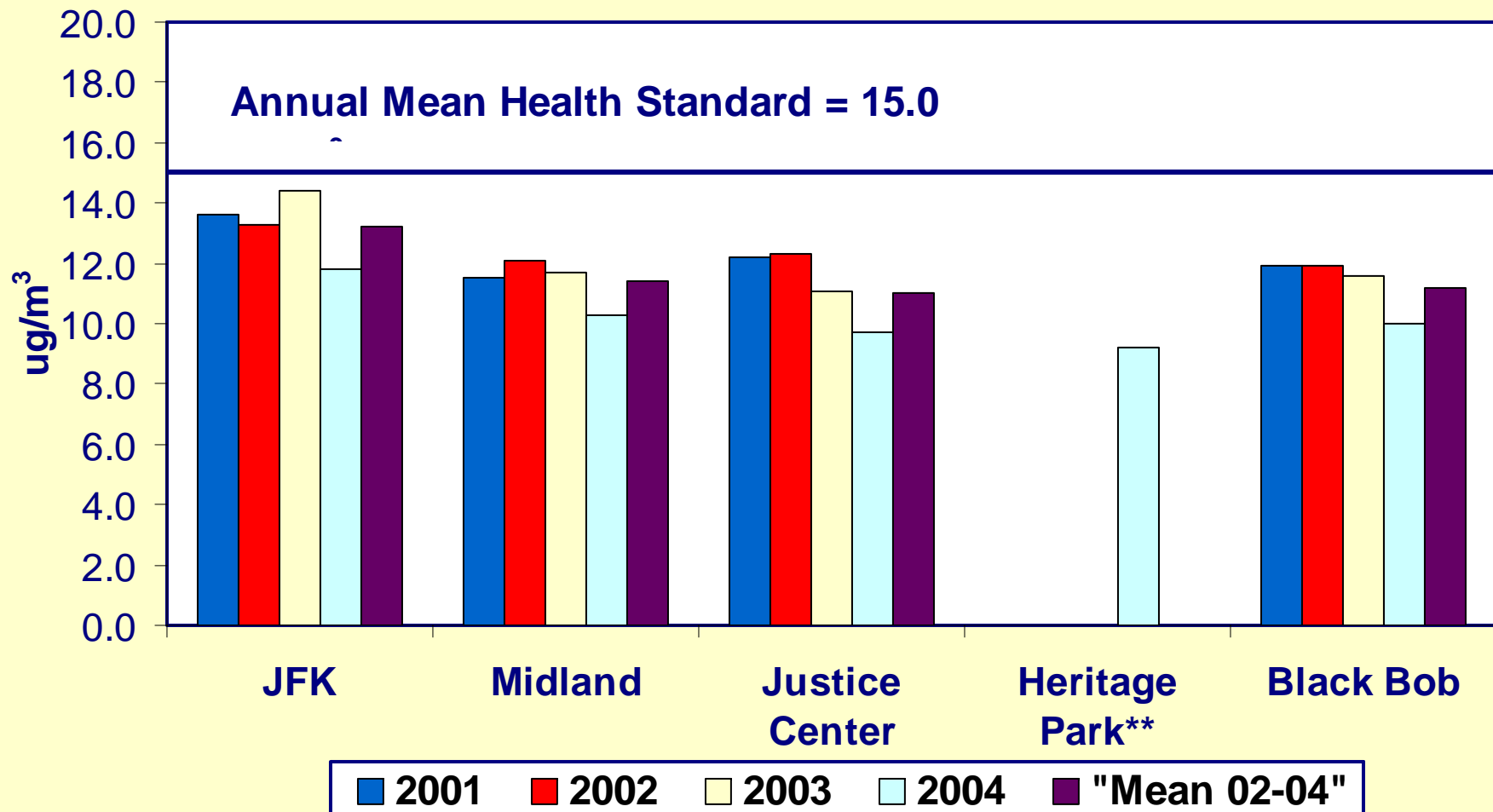
Ozone 2004 4th High 8 Hour Average



Ozone 2004 Highest 1 Hour Average

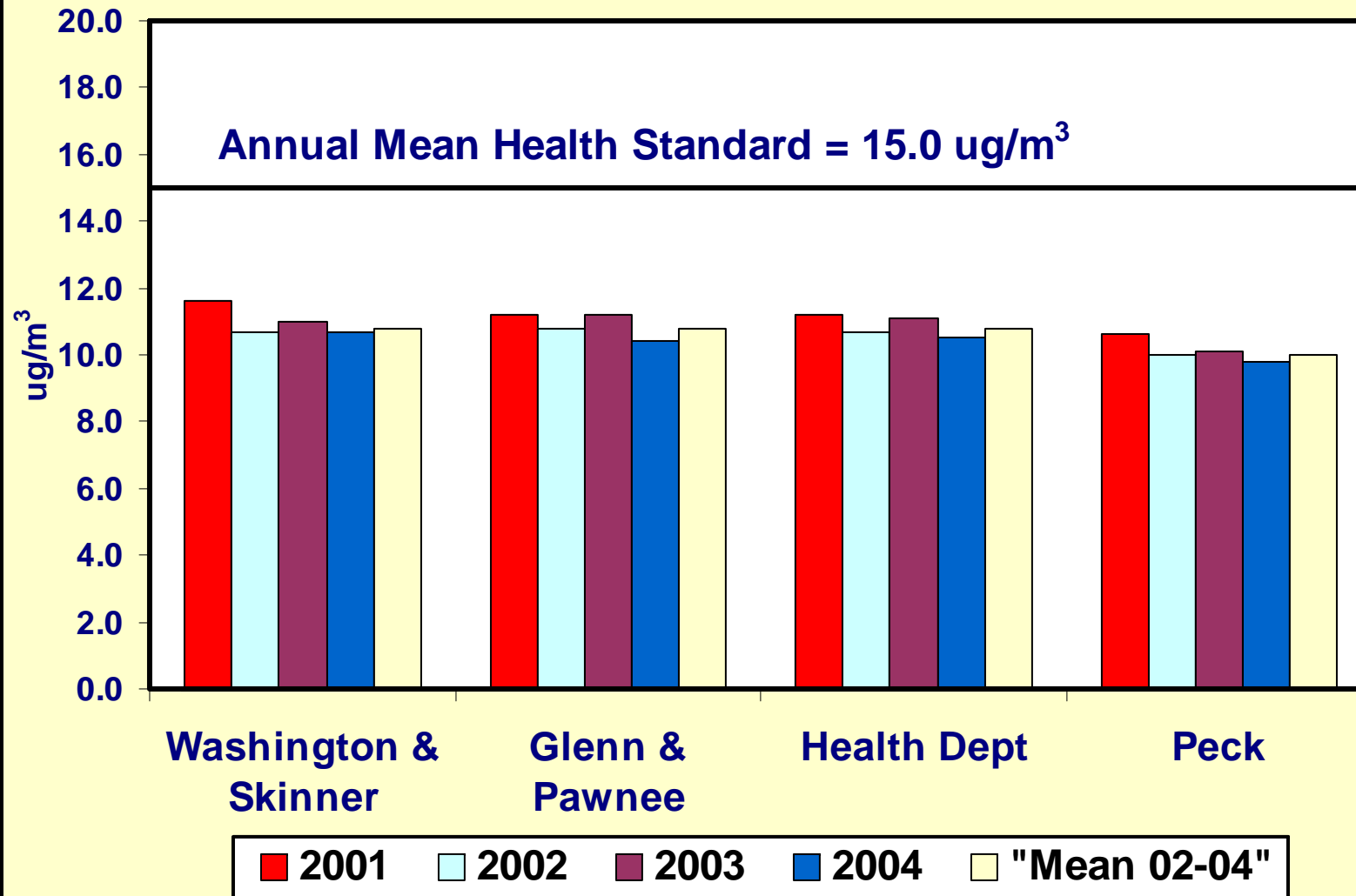


01-04 Kansas City Area PM_{2.5} Annual Means

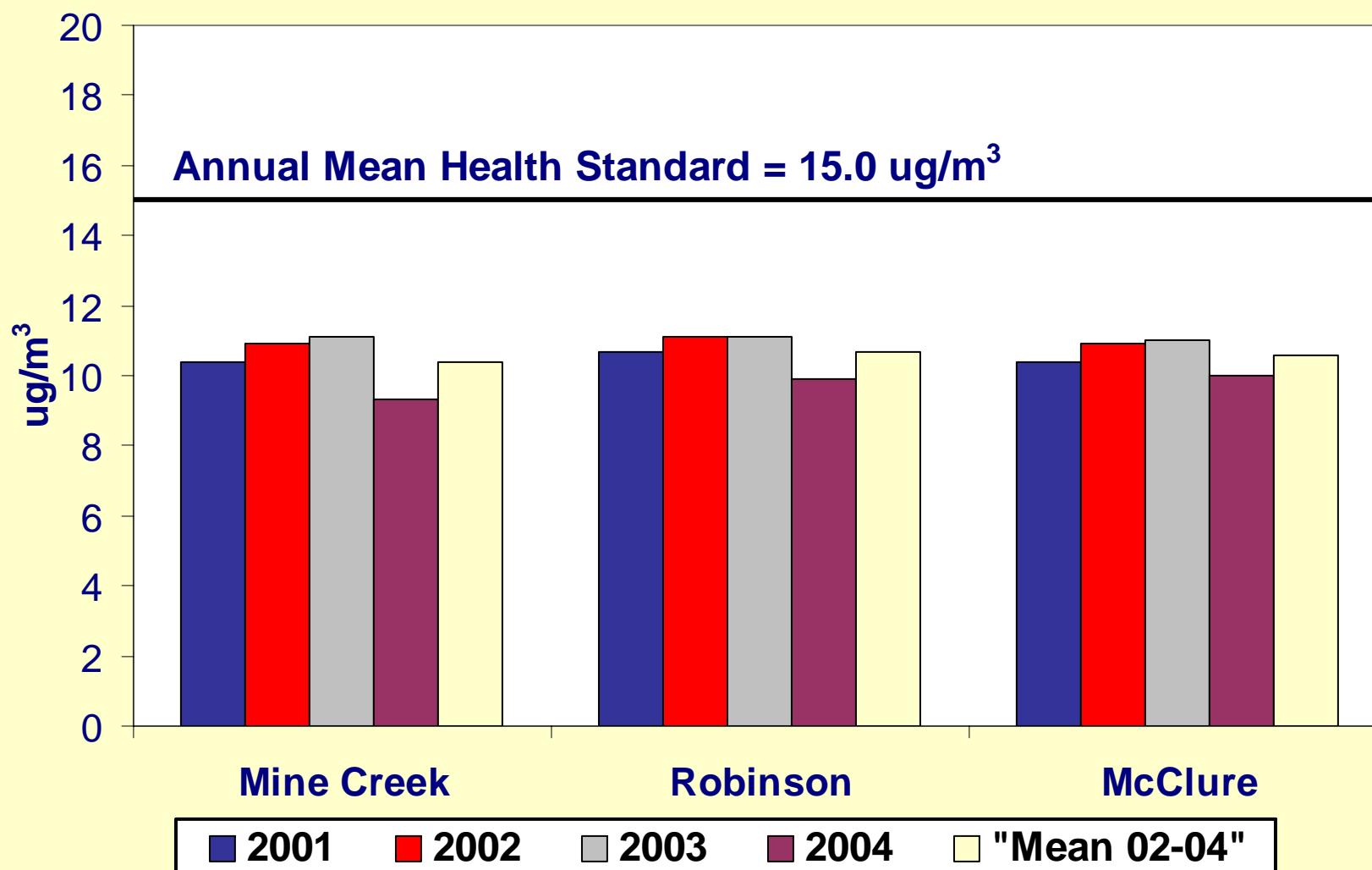


**Heritage Park monitor formerly located at Oxford M.S. - start date 01/01/04

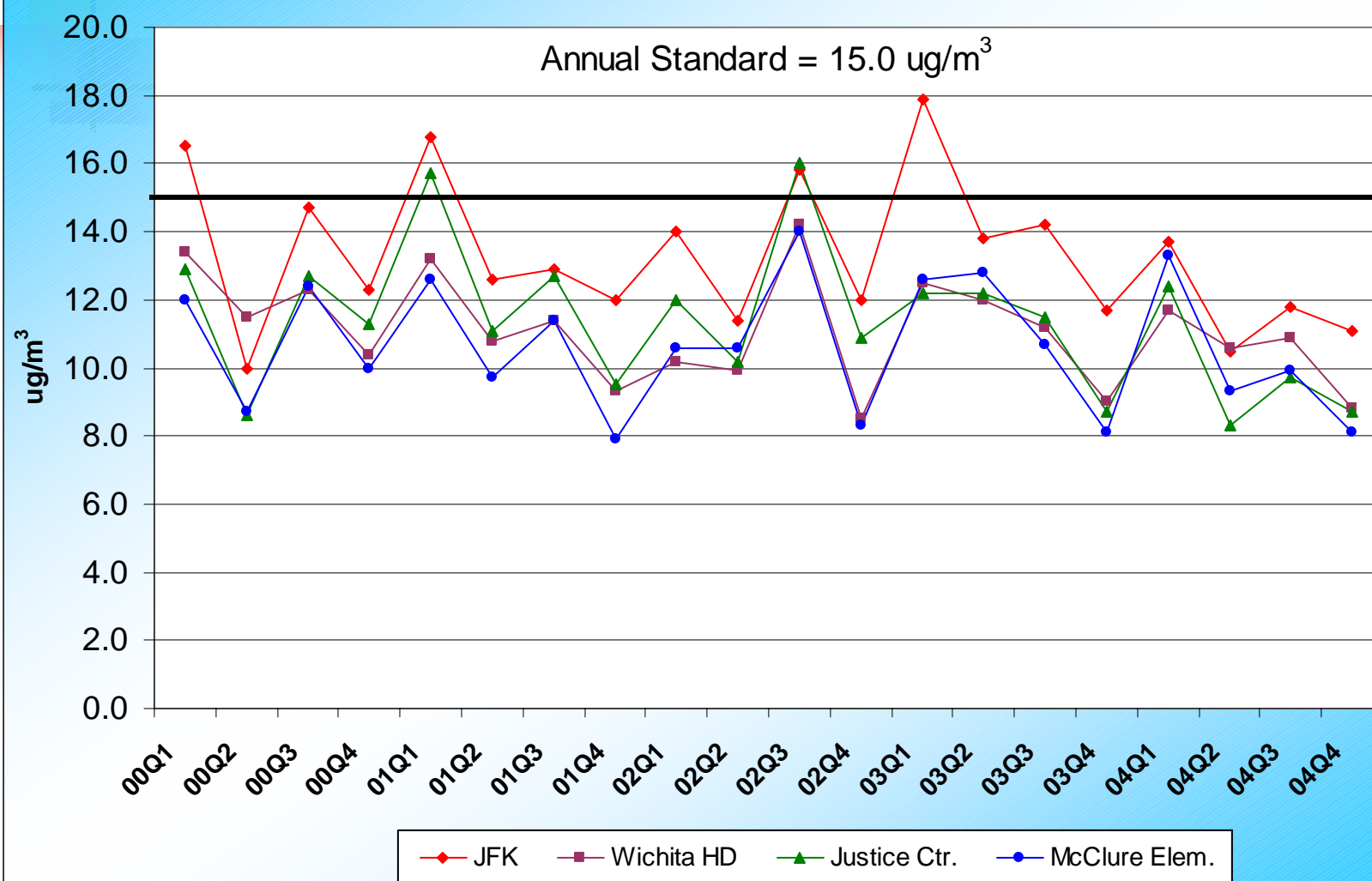
01-04 Wichita Area PM_{2.5} Annual Means

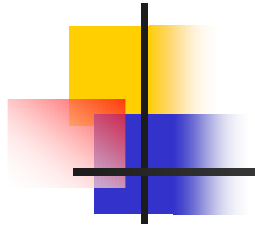


01-04 Topeka & Mine Creek PM_{2.5} Annual Means



PM_{2.5} Filter Quarterly Averages

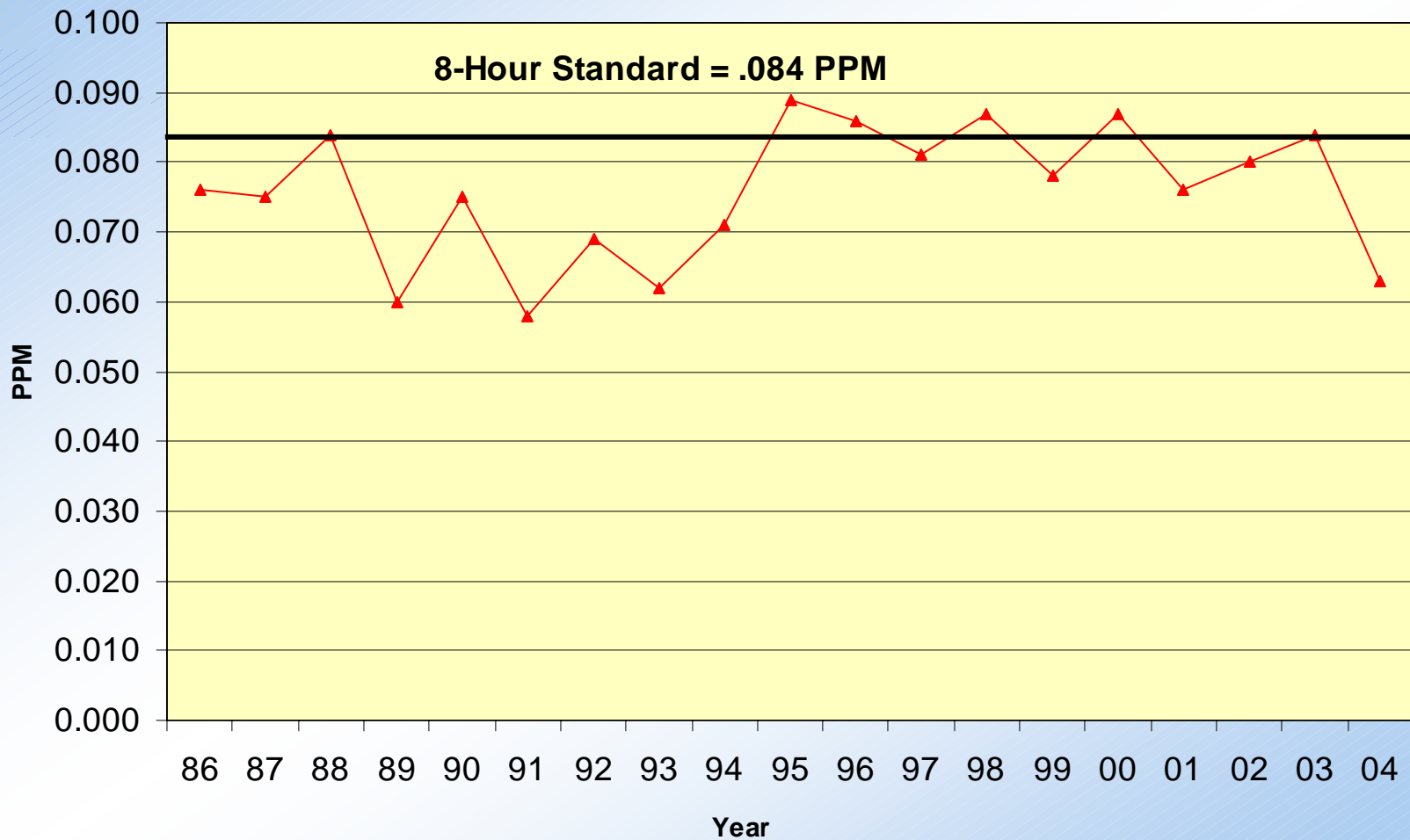




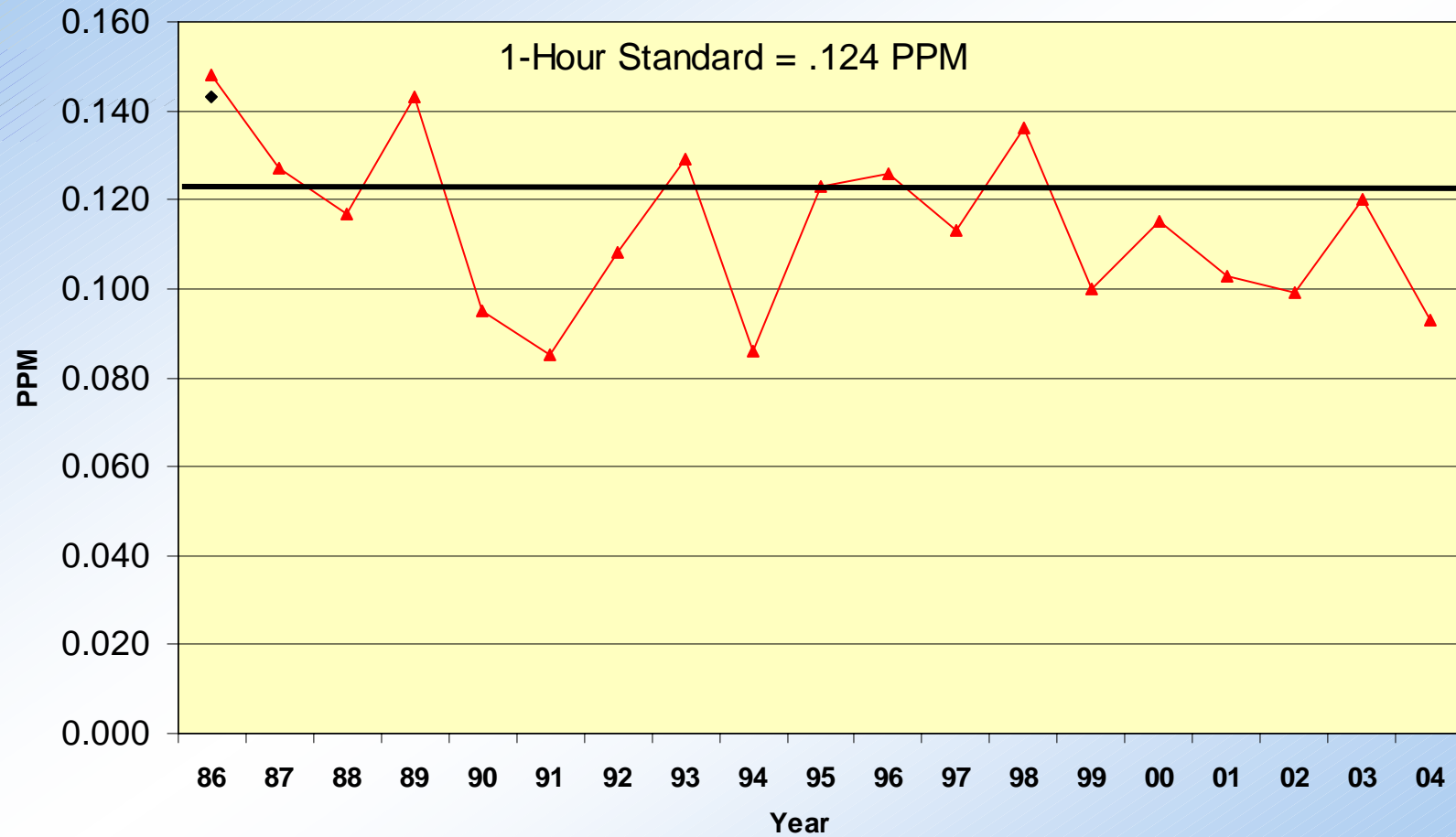
Kansas City

- Kansas City designated attainment for 8-hour ozone and PM_{2.5}
- 1-hour ozone results for 2004 - exceptional
- 8-hour ozone results for 2004 - exceptional

Kansas City, KS - Ozone 8-Hour 4th High



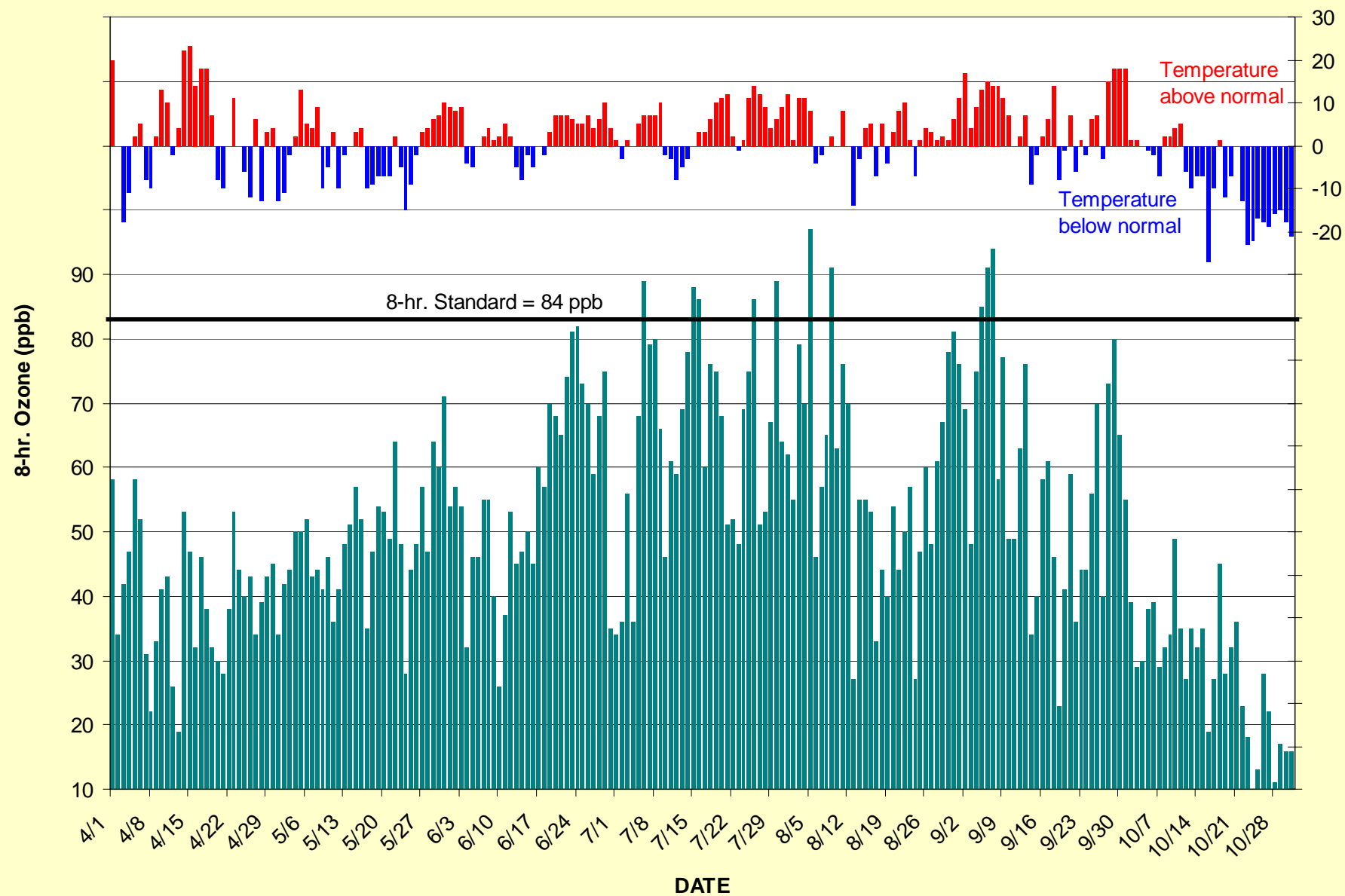
Kansas City, KS - Ozone 1-Hour



—▲— 1st High Daily Maximum 1 Hr.

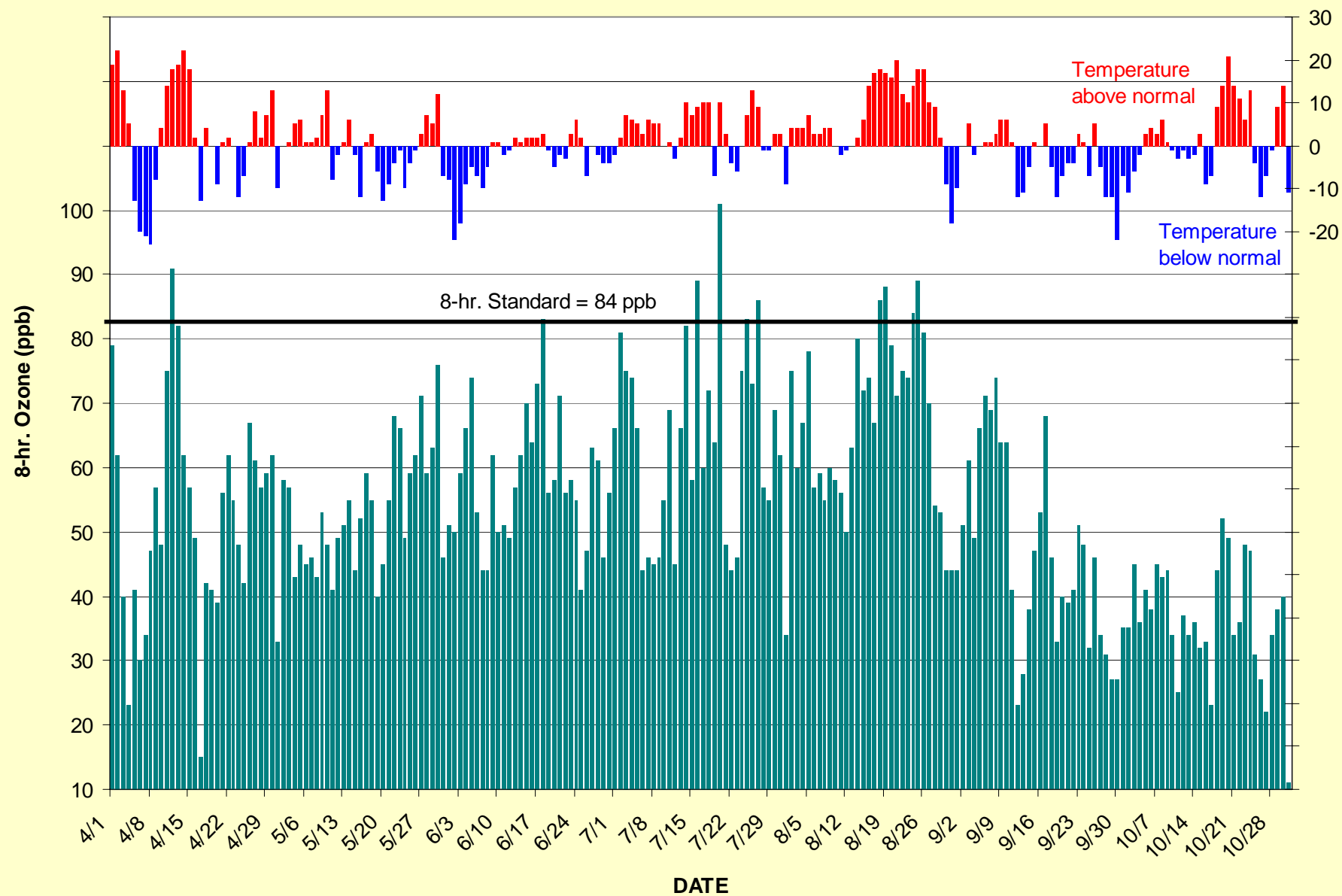
—◆— Additional Exceedances

Comparison between Max. Temperature departure from normal and Rocky Cr. 8-hr. Ozone 2002



* - Meteorology data from KC International Airport

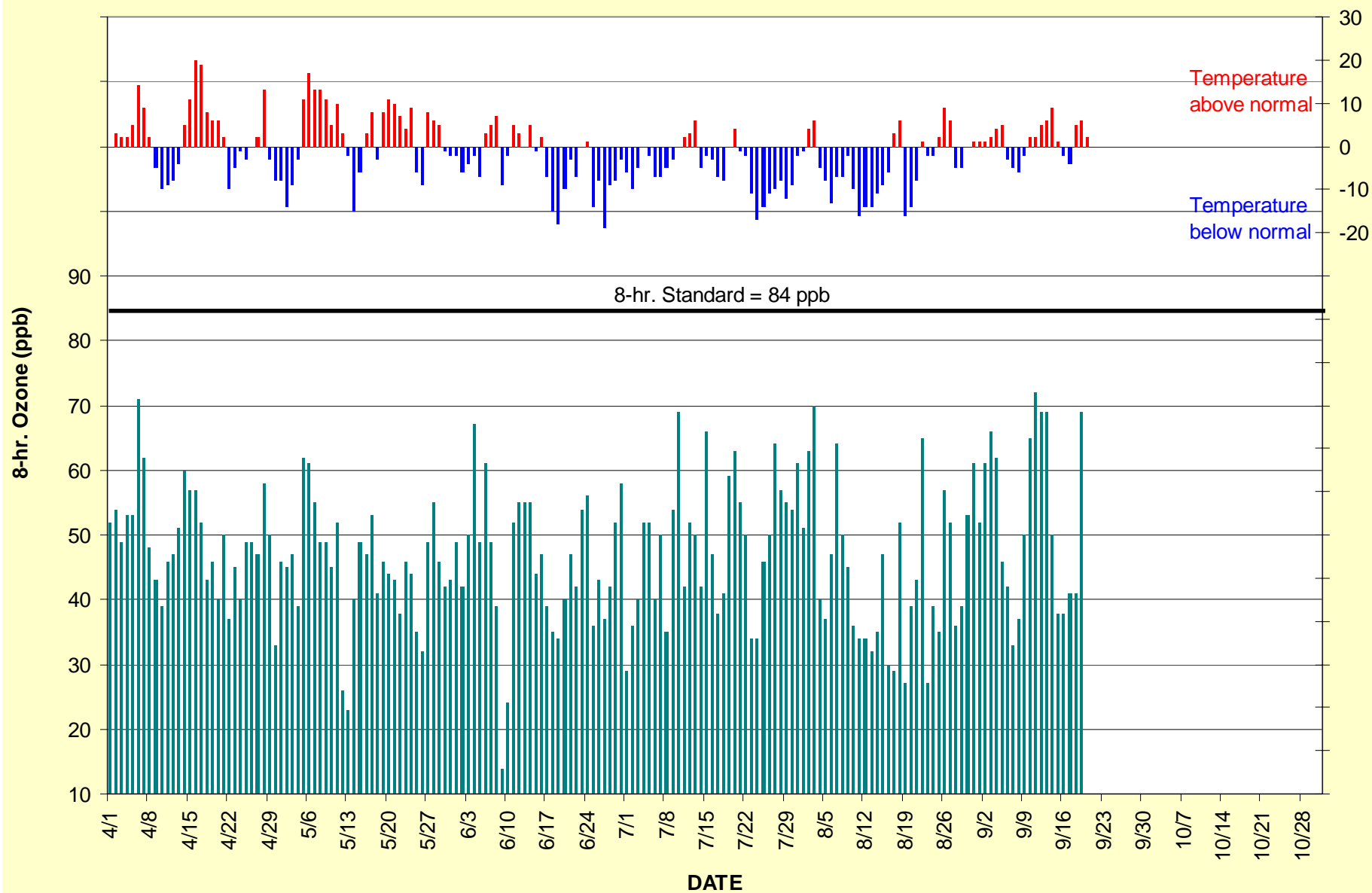
Comparison between Max. Temperature departure from normal and Rocky Cr. 8-hr. Ozone 2003



* - Meteorology data from KC International

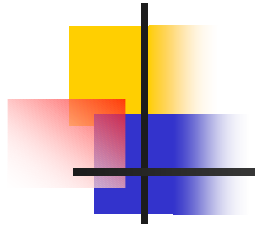
Rocky Cr. 8-hr. Ozone (ppb) Dep. From Normal Max.

Comparison between Daily Max. Temperature departure from normal and Rocky Cr. 8-hr. Ozone - 2004



* - Meteorology data from KC International Airport

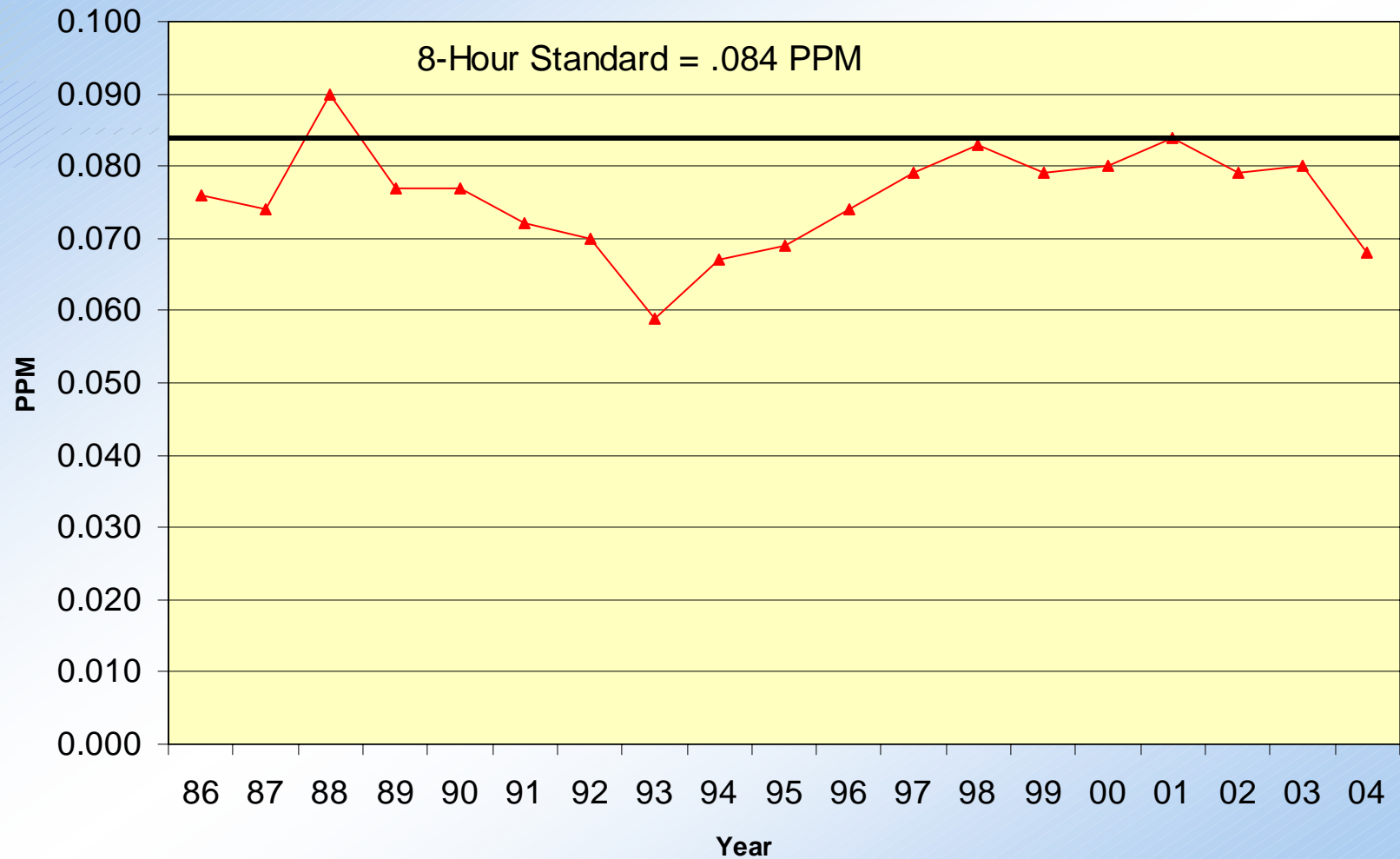
■ Rocky Cr. 8-hr. Ozone (ppb)
 ■ Dep. From Normal Max.



Wichita

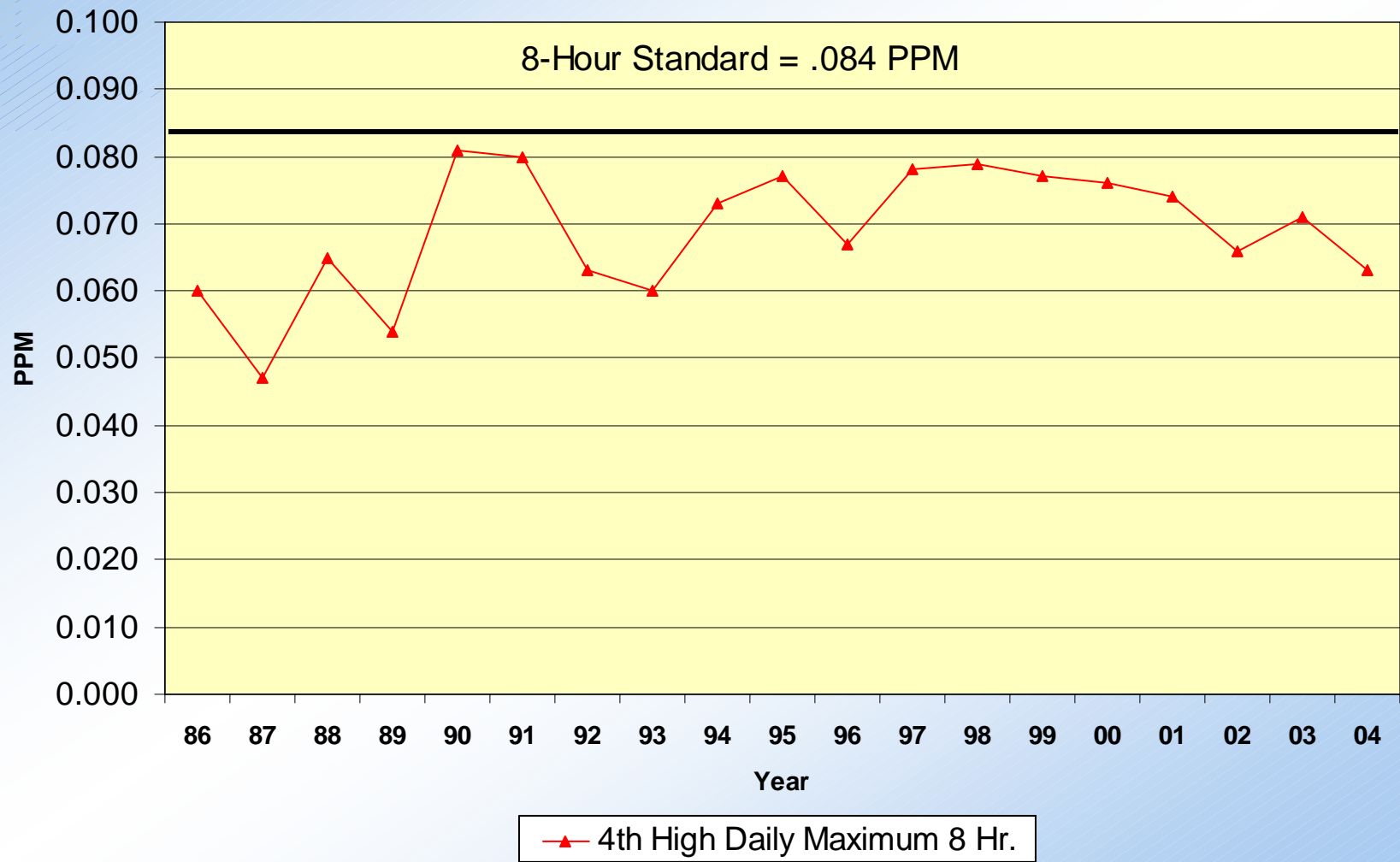
- Currently in attainment
- 1-hour ozone results for 2004 - exceptional
- 8-hour ozone results for 2004 - exceptional
- Air Quality Task Force updating ozone reduction strategy document

Wichita Dept. of Environmental Health - Ozone 8-Hour



—▲ 4th High Daily Maximum 8 Hr.

Park City - Ozone 8-Hour

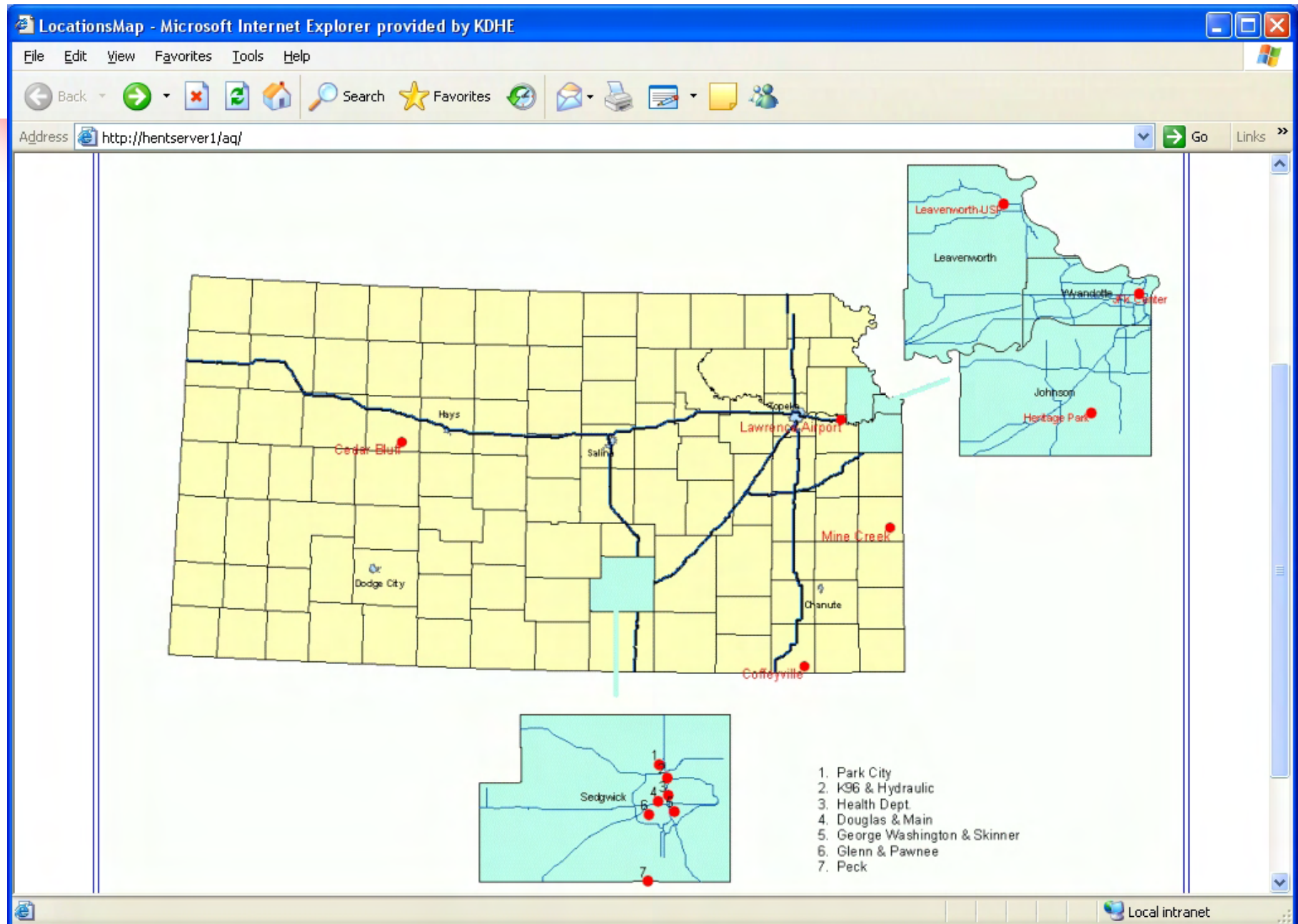




Where are we headed?

- Additional air toxics monitoring
- Near-real time access to monitoring data
- More continuous methods
- More CAFO monitoring?
- Monitor for non-criteria pollutants
- EPA's proposed network revision - NCore
- Nephelometers for regional haze (Cedar Bluff)

Near Real-Time Air Monitoring Data on BAR Website





The Kansas Department of Health and Environment

Kathleen Sebelius, Governor – Roderick L. Bremby, Secretary
Curtis State Office Building 1000 SW Jackson Topeka, KS 66612
(785) 296-1500 FAX: (785) 368-6368 Email: info@kdhe.state.ks.us



Health Environment Laboratories H&E Statistics

Bureau of Air and Radiation Air Quality Monitoring System

This web page provides the most current hourly averaged data available for ozone and PM 2.5. At this time, all other parameters are collected once a day. For example, values shown for the noon hour are based on measurements taken from noon to 1:00 p.m. The noon average will not be calculated until after 1:00 p.m. This results in an apparent one-hour time lag in the data. We present our data in Central Standard Time. Daylight Savings introduces another apparent one-hour time lag in the data.

Wichita Area

To select multiple sites: hold down the Ctrl key and click on the site to select it

Site:
Peck
Wichita Douglas and Main
Wichita George Washington and Skinner
Wichita Glenn and Pawnee
Wichita Health Dept.
Wichita K96 and Hydraulic

To select multiple pollutants: hold down the Ctrl key and click on the pollutant to select it

Pollutant:
Carbon Monoxide
Nitrogen Dioxide
Ozone
Particulate Matter 10
Particulate Matter 2.5
Sulfur Dioxide



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[Health](#) [Environment](#) [Laboratories](#) [H&E Statistics](#)

Bureau of Air and Radiation Air Quality Monitoring System

These data have been obtained from automated instruments and have not been subjected to a quality assurance review to determine their accuracy. They are presented for public awareness and should not be considered final until certified by our staff. Conditions such as power outages and equipment malfunctions can produce invalid data. Quality assured data can be obtained by contacting the Bureau of Air and Radiation. Please note that not all parameters are measured at all sites.

Wichita Area

Wednesday, May 11, 2005

Carbon Monoxide in PPM

Site/Hours	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Wichita Douglas and Main	0.8	0.9	0.8	0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wichita Health Dept.	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Nitrogen Dioxide in PPM

Site/Hours	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Peck	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wichita Health Dept.	0.006	0.006	0.005	0.006	0.009	0.015	0.017	0.013	0.008	0.008	0.008	0.008	0.008	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Why should you care?

- You and your family breathe Kansas air
- Air quality results drive attainment designations and control strategies
- Air quality results drive development of federal rules (MACT)
- Air quality results are used to validate modeling
- Overall, Kansas air quality is very good

QUESTIONS??

